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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/507,539	09/13/2004	Hiroshi Morita	04556/HG	1385

1933 7590 10/24/2006

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EXAMINER

THEISEN, DOUGLAS J

ART UNIT	PAPER NUMBER
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1724

DATE MAILED: 10/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/507,539

Applicant(s)

MORITA ET AL.

Examiner

Douglas J. Theisen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 October 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) 5 and 6 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 September 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 091304, 100606.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application
- ☐ Other: _____.

DETAILED ACTION

The Examiner acknowledged applicants' claim for priority under 35 USC 119 and receipt of the certified copy of the priority document in the Office Action mailed on 8 September 2006.

Election/Restrictions

1. Applicant's election of Group I in the reply filed on 3 October 2006 is acknowledged.

Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

2. Claims 5 and 6 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention there being no allowable generic or linking claim.

Election was made **without** traverse in the reply filed on 3 October 2006.

Claim Objections

3. Claim 2 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. The phrase "wherein the main stream liquid is pure water or ultra-pure water" is not a structural limitation of the apparatus.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 2, and 4 are rejected under 35 U.S.C. 102(b) as being anticipated by Japan publication number 11-138182A to Morita. Morita describes an apparatus for continuous dissolution which comprises a dissolution portion for dissolving a gas into a main stream liquid (ozone dissolution equipment 12), the apparatus further comprising a flow meter which measures a flow rate of the main stream liquid and outputs a signal of a value obtained by the measurement (flow meter 14), a mechanism for controlling a flow rate which controls an amount of supply of the gas based on the signal input from the flow meter (controller 16) and an apparatus for degassing the main stream liquid which is disposed at a position at an upstream of the dissolution portion for dissolving a gas (tank 1 and exhauster style 10, “gases other than the oxygen generated by decomposition of the ozone which did not dissolve in ultrapure water into the tank, and ozone, and the ozone contained in ozone content gas can be discharged out of the a tank”), wherein the main stream liquid is ultra-pure water. Morita describes a process for continuous dissolution which comprises continuously dissolving a gas (in dissolution equipment 12) or a gas (in dissolution equipment 12) and an other liquid (with acid cistern 19) into a main stream liquid, wherein the main stream liquid is degassed (in tank 1) before the gas is dissolved and an amount of supply of the gas is controlled based on a flow rate (flow meter 14 and controller 16) of the main stream liquid after the degassing. See figure 1 and machine translation, detailed description, pp. 3-4, paragraphs 6-8.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Japan publication number 11-138182A to Morita as applied to claims 1, 2, and 4 above, and further in view of Japan publication number 2001-085304 to Matsunaga. Morita describes an apparatus for continuous dissolution which comprises a dissolution portion for dissolving a gas into a main stream liquid (ozone dissolution equipment 12), the apparatus further comprising a flow meter which measures a flow rate of the main stream liquid and outputs a signal of a value obtained by the measurement (flow meter 14), a mechanism for controlling a flow rate which controls an amount of supply of the gas based on the signal input from the flow meter (controller 16) and an apparatus for degassing the main stream liquid which is disposed at a position at an upstream of the dissolution portion for dissolving a gas (tank 1 and exhauster style 10, “gases other than the oxygen generated by decomposition of the ozone which did not dissolve in ultrapure water into the tank, and ozone, and the ozone contained in ozone content gas can be discharged out of the a tank”), wherein the main stream liquid is ultra-pure water. Morita does not describe a means for injecting an other liquid into the main stream liquid and controls an amount of addition of the other liquid based on the signal. Matsunaga describes a means for injecting an other liquid (from additive tank 3 or 31a) into the main stream liquid (solvent tank 2 or 21-pure water) and controls

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an amount of addition of the other liquid based on the signal of flow rate of the main stream liquid (flow meter 14b for the water, flow meter 14c for the additive, and CPU 6). See figures 1 and 2 and machine translation, detailed description p. 4, paragraph 36 and pp. 5-6, paragraphs 40-50. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to provide Morita with a flow meter and controller on an other liquid (acid cistern 19) in order to control the addition of the other liquid based on the signal of the flow rate of the main stream liquid.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Douglas J. Theisen whose telephone number is 571-272-1168. The examiner can normally be reached on Monday, Tuesday, and Wednesday 6:30 until 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on 571-272-1166. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

DUANE SMITH
PRIMARY EXAMINER

DJ
10-23-00

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

djt